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AGRICULTURE/FORESTRY
HYDROLOGY

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Mekong Secretariat
c/o ESCAP Sala Santitham
Bangkok, Thailand

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November 20, 1975

LISTING OF NASA THESAURUS TERM CHANGES SINCE SEPTEMBER 1971

The attached listing consists of 1229 postable and 425 non-postable terms added, deleted, or changed in the NASA Thesaurus between September 1971, the publication data of the NASA Thesaurus Alphabetical Update, NASA-SP-7040, and a cutoff date of October 31, 1975. Each nonpostable term is followed by a "USE" designation referring to a postable term. Some postable terms may be followed by explanatory status change designations. An asterisk precedes entries added since the cumulative listing of May 15, 1975.

The NASA Thesaurus contains 18580 terms of which 15200 are postable and 3380 are nonpostable. The next cumulative listing of Thesaurus term changes is scheduled for May 1976.

NASA THESAURUS TERM CHANGES SINCE PUBLICATION OF NASA SP-7040, SEPTEMBER

A-9 AIRCRAFT			ANIK A	
A-10 AIRCRAFT			ANIK B	
* ABM			* ANIK C	
* ASE APOGEE BOOST MOTORS			* ASE ANIK 3	
ACCLINAL VALLEYS	DELETED		* ANIK 3	
* ACOUSTIC SOUNDING			ANNULAR DRAINAGE PATTERNS	DELETED
ACOUSTICAL HOLOGRAPHY			ANOMALIES	
ACOUSTO-OPTICS			CHANGED TO POSTABLE	
ACTIVE GLACIERS			ANOMALOUS TEMPERATURE ZONES	
USE GLACIERS			ANS	
ACTIVE VOLCANOES			USE ASTRONOMICAL NETHERLANDS SATELLITE	
USE VOLCANOES			ANTARCTIC ENVIRONMENT	
* ADENOSINE DIPHOSPHATE			USE ICE ENVIRONMENTS	
* ADENOSINE DIPHOSPHATE (ADP)			ANTICLINAL MOUNTAINS	DELETED
CHANGED TO ADENOSINE DIPHOSPHATE			ANTICLINAL VALLEYS	DELETED
* ADENOSINE TRIPHOSPHATE			ANTICLINES	
* ADENOSINE TRIPHOSPHATE (ATP)			ANTICLINORIA	
CHANGED TO ADENOSINE TRIPHOSPHATE			USE ANTICLINES	
ADIRONDACK MOUNTAINS (NY)			ANTIREFLECTION COATINGS	
ADOFF FLATS			ANVIL CLOUDS	
USE FLATS (LANDFORMS)			* APOGEE BOOST MOTORS	
* ADP			APOLLO SOYUZ TEST PROJECT	
* ASE ADENOSINE DIPHOSPHATE			APOLLO 17 FLIGHT	
ADRIATIC SEA			APPALACHIAN MOUNTAINS (NORTH AMERICA)	
* ADVANCED AIRBORNE COMMAND POST			* APPLICATIONS EXPLORER SATELLITES	
USE F-4A AIRCRAFT			APPLICATIONS TECHNOLOGY SATELLITES	
ADVANCED EVA PROTECTION SYSTEMS			USE ATS	
USE AEPS			AQUIFERS	
ADVANCED RECONN ELECTRIC SPACECRAFT			ARABIAN SEA	
* ADVANCED TECHNOLOGY LIGHT TWIN			ARCHAEOLOGY	
USE PA-34 SENECA AIRCRAFT			ARCHIPELAGOES	
ADVANCING GLACIERS			ARCTIC ENVIRONMENTS	
USE GLACIERS			USE ICE ENVIRONMENTS	
ADVANCING SHORELINES			AREA NAVIGATION	
USE BEACHES			ARES (SPACECRAFT)	
AEPS			USE ADVANCED RECONN ELECTRIC SPACECRAFT	
AERIAL IMAGERY			ARETS	
USE AERIAL PHOTOGRAPHY			USE ARIZONA REGIONAL ECOLOGICAL TEST SITE	
AERODYNAMIC INTERFERENCE			ARGON-OXYGEN ATMOSPHERES	
AERONAUTICAL SATELLITES			ARID LANDS	
AEROQUATIC VEHICLES			ARIEL 4 SATELLITE	
* AEROSAT SATELLITES			* ARIANE LAUNCH VEHICLE	
AFRICAN RIFT SYSTEM			ARIZONA REGIONAL ECOLOGICAL TEST SITE	
AIMP-D			ARROYOS	
USE EXPLORER 33 SATELLITE			ARTIFICIAL HARBORS	
AIMF-1			ASH CONES	DELETED
USE EXPLORER 33 SATELLITE			ASTP	
AIMF-2			USE APOLLO SOYUZ TEST PROJECT	
USE EXPLORER 35 SATELLITE			ASTRONOMICAL NETHERLANDS SATELLITE	
AIR BAG RESTRAINT DEVICES			* ASYNCHRONOUS MOTORS	
AIR LAND INTERACTIONS			ATCHAFALAYA RIVER BASIN (LA)	
AIR SEA INTERACTIONS			ATHEROSCLEROSIS	
USE AIR WATER INTERACTIONS			USE ARTERIOSCLEROSIS	
AIR QUALITY			* ATLIT	
AIR SEA ICE INTERACTIONS			* ASE PA-34 SENECA AIRCRAFT	
AIR WATER INTERACTIONS			ATMOSPHERIC WINDOWS	
* AIRBORNE SURVEILLANCE RADAR			ATOLL REEFS	
* AIRBORNE WARNING AND CONTROL SYSTEM			USE CORAL REEFS	
USE AWACS AIRCRAFT			ATOLLS	
AIRCRAFT MANEUVERS			ATOMIC MASS	
AIRCRAFT SURVIVABILITY			USE ATOMIC WEIGHTS	
AIRFIELDS			ATOMIC WEIGHTS	
USE AIRPORTS			* ATP	
ALADIN 2 AIRCRAFT			* ASE ADENOSINE TRIPHOSPHATE	
ALBANIA			ATS	
ALPALPA			ATS (SATELLITES)	DELETED
ALGAL BLOOM			AUGER SPECTROSCOPY	
USE ALGAE			AUTOMOBILE FUELS	
ALKALI FLATS	DELETED		AV-8A AIRCRAFT	
ALL-WEATHER LANDING SYSTEMS			USE HARRIER AIRCRAFT	
* ALLEGHENY PLATEAU (US)			* AWACS AIRCRAFT	
ALLUVIAL CONES	DELETED		AXIAL STREAMS	DELETED
ALLUVIAL FANS	DELETED		B-1 AIRCRAFT	
ALLUVIAL FLATS	DELETED		BACK BAYS	DELETED
ALLUVIAL PLAINS	DELETED		BACKSHORES	
ALLUVIAL TERRACES	DELETED		USE BEACHES	
ALLUVIUM			BADLANDS	
ALPHA JET AIRCRAFT			BAHRAIN	
ALPS MOUNTAINS (EUROPE)			BAJA CALIFORNIA	
ALTOCUMULUS CLOUDS	DELETED		USE LOWER CALIFORNIA (MEXICO)	
AMAZON REGION (SOUTH AMERICA)			BAJADAS	
AMOPHOUS SEMICONDUCTORS			USE FANS (LANDFORMS)	
ANACLINAL STREAMS	DELETED		BALI (INDONESIA)	
ANACLINAL VALLEYS	DELETED		BALL LIGHTNING	
ANALYSIS OF VARIANCE			BALLOON-BORNE INSTRUMENTS	
ANDES MOUNTAINS (SOUTH AMERICA)			BALTIC SHIELD (EUROPE)	
ANDORRA			* BANGLADESH	
ANGINA PECTORIS			BARBADOS	
ANGIOGRAPHY			BARBED TRIBUTARIES	DELETED

BARCHANS		CAT	
USE DUNES		USE COMPUTER ASSISTED INSTRUCTION	
BARENTS SEA		CAMEROON	
BARITO RIVER BASIN (INDONESIA)		CANNONBALL 2 SATELLITE	
BARIUM ION CLOUDS		CANYONS	
BARLEY		CAP CLOUDS	
BARREN LAND		CAPIES (LANDFORMS)	
BARRENS		CARBON FIBER REINFORCED PLASTICS	
USE BARREN LAND		* CARBON LASERS	
BARRIER BARS	DELETED	CARBON-CARBON COMPOSITES	
BARRIER BEACHES	DELETED	* CARBONACEOUS CHONDRITES	
BARRIER FLATS	DELETED	CARETS (TEST SITE)	
BARRIER ISLANDS	DELETED	USE CENTRAL ATLANTIC REGIONAL ECOL TEST SITE	
BARRIER LAGOONS	DELETED	CARIBOUS	
BARRIER LAKES	DELETED	CAROTID SINUS BODY	
BARRIER REEFS	DELETED	CASCADE RANGE (CA-OR-WA)	
BARRIERS (LANDFORMS)		CAST ALLOYS	
BARS (LANDFORMS)		CATCHMENT AREAS	
BASIC (PROGRAMMING LANGUAGE)		USE WATERSHEDS	
BASINS		* CAUCASUS MOUNTAINS (U.S.S.R.)	
USE STRUCTURAL BASINS		CAYS	
BATHOLITHS		USE KEYS (ISLANDS)	
BAY ICE		CDC 6400 COMPUTER	
BAYHEAD BARS	DELETED	CEDAR RAPIDS (IA)	
BAYHEAD BEACHES	DELETED	CENSUS	
BAYHEAD DELTAS	DELETED	CENTRAL AFRICAN REPUBLIC	
BAYMOUTH BARS	DELETED	CENTRAL ATLANTIC REGION (US)	
BAYCUS		CENTRAL ATLANTIC REGIONAL ECOL TEST SITE	
BEAM LEADS		CENTRAL EUROPE	
BEAUFORT SEA (NORTH AMERICA)		CENTRAL PIEDMONT (US)	
BEDROCK		CFRP	
BEDS (GEOLOGY)		USE CARBON FIBER REINFORCED PLASTICS	
BELTED PLAINS	DELETED	CHAD	
BHUTAN		CHANNEL MULTIPLIERS	
BIG BANG COSMOLOGY		CHANNEL WINGS	
BIGHORN MOUNTAINS (MT-WY)		CHANNELTRONS	
BILLOW CLOUDS	DELETED	USE CHANNEL MULTIPLIERS	
* BIODEGRADATION		CHAOTIC CLOUD PATTERNS	
BIOLOGICAL CLOCKS		USE CLOUDS (METEOROLOGY)	
USE RHYTHM (BIOLOGY)		CHAPARRAL	
BIOREGENERATIVE LIFE SUPPORT SYSTEMS		CHARGE COUPLED DEVICES	
USE CLOSED ECOLOGICAL SYSTEMS		CHARGE TRANSFER DEVICES	
* BIOSPHERE		CHEMICAL FRACTIONATION	
* CHANGED TO POSTABLE		CHENA RIVER BASIN (AK)	
BIPOLAR TRANSISTORS		CHESAPEAKE BAY (US)	
BIRDFOOT DELTAS	DELETED	CHIAPAS (MEXICO)	
* BIREFRINGENT FILTERS		CHINA (COMMUNIST) MAINLAND	
BLACK HILLS (SD-WY)		USE CHINESE PEOPLES REPUBLIC	
BLACK HOLES (ASTRONOMY)		CINDER CONES	
BLADDER MECHANICS	DELETED	USE CONES (VOLCANOES)	
BLADDERS (MECHANICS)		CIRQUES (LANDFORMS)	
USE DIAPHRAGMS (MECHANICS)		CIRROCUMULUS CLOUDS	
BLIGHT		CIRROSTRATUS CLOUDS	
BLOCK DIAGRAMS		CIRRUS SHIELDS	
BLOCK ISLAND SOUND (RI)		CITRUS TREES	
* BLOOD PUMPS		CLOSED BASINS	
BLOOD VOLUME		USE STRUCTURAL BASINS	
* BMC		CLOSED FAULTS	
USE BONE MINERAL CONTENT		USE GEOLOGICAL FAULTS	
BODY-WING CONFIGURATIONS		CLOSED FOLDS	DELETED
* BOEING 747B AIRCRAFT		* CLOUD DISPERSAL	
* USE E-4A AIRCRAFT		CLOUD STREETS	
BOGS		USE CLOUDS (METEOROLOGY)	
USE MARSHLANDS		COACHELLA VALLEY (CA)	
BOLL WEEVILS		CLEAN ENERGY	
BOLLWORMS		COAL GASIFICATION	
* BONE DEMINERALIZATION		COAL LIQUEFACTION	
* BONE MINERAL CONTENT		COAL UTILIZATION	
BONNEVILLE SALT FLATS (UT)		COASTAL CURRENTS	
BORON REINFORCED MATERIALS		COASTAL DUNES	
* BORON-EPOXY COMPOUNDS		USE DUNES	
BOTSWANA		COASTAL MARSHES	
BOUNDARY LAYER EQUATIONS		USE MARSHLANDS	
BRAIDED STREAMS	DELETED	COASTAL PLAINS	
BREAKWATERS		COASTAL RANGES (CA)	
BREEDING (REPRODUCTION)		COASTAL WATER	
BRIDGES (LANDFORMS)		COFFEE	
BRITISH HONDURAS		COLD FRONTS	
BROKEN CLOUDS	DELETED	COLLISIONAL PLASMAS	
BROWN WAVE EFFECT		COLORADO PLATEAU (US)	
BRUNEL		COLS	
BRUSH (BOTANY)		USE GAPS (GEOLOGY)	
BSX		COLUMBIA RIVER BASIN (ID-OR-WA)	
BUBBLE TECHNIQUE		COMET HEADS	
* BUBBLE MEMORY DEVICES		COMET NUCLEI	
BUCKET BRIGADE DEVICES		COMET TAILS	
BURUNDI		COMMERCIAL ENERGY	
BUTTES		* COMBONALITY (EQUIPMENT)	
C-1A AIRCRAFT		COMBONES	DELETED

COMMUNICATIONS TECHNOLOGY SATELLITE
 COMPUTER ASSISTED INSTRUCTION
 COMPUTER SYSTEMS DESIGN
 COMPUTERIZED CONTROL
 USE NUMERICAL CONTROL
 CONDITIONED REFLEXES
 CONES (VOLCANOES)
 CONGO (BRAZZAVILLE)
 CONGO (KINSHASA)
 USE ZAIRE
 CONGRESSIONAL REPORERS
 CONIFFERS
 CONSEQUENT LAKES DELETED
 CONSEQUENT STREAMS DELETED
 CONSEQUENT VALLEYS DELETED
 CONSUMABLES (SPACECRAFT SUPPLIES)
 CONTACTS (GEOLOGY)
 CONTINUOUS SPECTRA
 CONTINUOUS WAVE LASERS
 CONTROL CONFIGURED VEHICLES
 CONTROL STICKS
 CONVECTION CLOUDS
 COOK INLET (AK)
 COPERNICUS SPACECRAFT
 USE CAO 3
 COPSES
 COPYRIGHTS
 CORAL HEADS
 USE CORAL REEFS
 CORN
 CCFNER FLOW
 CORONARY ARTERY DISEASE
 CORROSION TEST LOCPS
 COS-B SATELLITE
 COSMOS 381 SATELLITE
 COTTON
 COULEES
 USE CANYONS
 COUNTER-ROTATING WHEELS
 CRATONS
 * CREW EXPERIMENT STATIONS
 * CREW OBSERVATION STATIONS
 * CREW STATIONS
 * CREW WORK STATIONS
 CROP IDENTIFICATION
 CROPLANDS
 USE FARMLANDS
 CROSS FAULTS
 USE GEOLOGICAL FAULTS
 CROSSBEDDING (GEOLOGY)
 CRUSTAL FRACTURES
 CUBA
 CUESTAS
 USE RIDGES
 CULTURAL RESOURCES
 CURIUM COMPOUNDS
 CURRENT CONVERTERS (AC TO DC)
 CURRENTS (OCEANOGRAPHY)
 USE WATER CURRENTS
 CUSPS (LANDFORMS)
 CYCLOGENESIS
 CYPRUS
 D-2 SATELLITES
 D-2E SATELLITE
 USE D-2 SATELLITES
 * DAD EXPLORER
 * USE DUAL AIR DENSITY EXPLORER
 DAHOMEY
 DATA BASES
 DATA BUSES
 USE CHANNELS (DATA TRANSMISSION)
 DATA COLLECTION PLATFORMS
 DATA COMPRESSION
 DATA COMPRESSORS DELETED
 DATA CONVERSION ROUTINES
 DDP COMPUTERS
 DDP 516 COMPUTER
 DEATH VALLEY (CA)
 DECIDUOUS TREES
 DEEPWATER TERMINALS
 DEFOLIATION
 REFORESTATION
 DELAWARE RIVER BASIN (US)
 DELPHI METHOD (FORECASTING)
 DELTAIC COASTAL PLAINS DELETED
 DELTAS
 DENDRITIC DRAINAGE
 USE DRAINAGE PATTERNS
 DENSE FLASHES

* DENSITY WAVE MODEL
 DEPRESSIONS (TOPOGRAPHY)
 USE STRUCTURAL BASINS
 DESERTLINE
 DESIGN ANALYSIS
 DIADEME SATELLITES
 REPLACES DIADEME SATELLITE
 DIASTOLIC PRESSURE
 DIELECTRIC CONSTANT
 USE PERMITTIVITY
 DIESEL FUELS
 DIFFRACTION LIMITED CAMERAS
 DIKES
 USE ROCK INTRUSIONS
 DIODE-TRANSISTOR-LOGIC INTEG CIRCUITS
 USE DTL INTEGRATED CIRCUITS
 DISEASED VEGETATION
 USE FLIGHT
 DISTRIBUTED PARAMETER SYSTEMS
 DIVIDES (LANDFORMS)
 DOMESTIC SATELLITE COMMUNICATIONS SYSTEMS
 DOMINICA
 DOMINICAN REPUBLIC
 * DOPED CRYSTALS
 DORMANT VEGETATION DELETED
 DRAINAGE PATTERNS
 DROP TRANSFER
 DROUGHT
 DROUGHT CONDITIONS
 USE DROUGHT
 DRUMLINS
 USE GLACIAL DRIFT
 DTL INTEGRATED CIRCUITS
 * DUAL AIR DENSITY EXPLORER
 DUNES
 DUST STORMS
 DYE LASERS
 DYSPROSIUM COMPOUNDS
 * E-2A AIRCRAFT
 * E-3A AIRCRAFT
 * E-4A AIRCRAFT
 EAI 8400 COMPUTER
 EAI 8900 COMPUTER
 EARTH RESOURCES EXPERIMENT PACKAGE
 USE EREP
 EARTH RESOURCES INFORMATION SYSTEM
 EARTH RESOURCES OBSERVATION SATELLITES
 USE EROS (SATELLITES)
 EARTH RESOURCES SURVEY PROGRAM
 EARTH RESOURCES TECHNOLOGY SATELLITE A
 USE LANDSAT 1
 EARTH RESOURCES TECHNOLOGY SATELLITE B
 USE LANDSAT 2
 EARTH RESOURCES TECHNOLOGY SATELLITE C
 USE LANDSAT C
 EARTH RESOURCES TECHNOLOGY SATELLITE D
 USE LANDSAT D
 EARTH RESOURCES TECHNOLOGY SATELLITE E
 USE LANDSAT E
 EARTH RESOURCES TECHNOLOGY SATELLITE F
 USE LANDSAT F
 EARTH RESOURCES TECHNOLOGY SATELLITE 1
 USE LANDSAT 1
 EARTH RESOURCES TECHNOLOGY SATELLITES
 USE LANDSAT SATELLITES
 EARTH TIDES
 EARTHQUAKE DAMAGE
 EAST GERMANY
 EBF
 USE EXTERNALLY BLOWN FLAPS
 ECHELON FAULTS
 USE GEOLOGICAL FAULTS
 ECHOCARDIOGRAPHY
 ECONOMIC DEVELOPMENT
 ECOSYSTEMS
 * ECS
 * USE EUROPEAN COMMUNICATIONS SATELLITE
 EFFECTIVE PERCEIVED NOISE LEVELS
 EL SALVADOR
 * ELECTRIC AUTOMOBILES
 * ELECTRIC MOTOR VEHICLES
 ELECTRIC POWER SUPPLIES
 ELECTROMAGNETIC NOISE MEASUREMENT
 ELECTROMAGNETIC SURFACE WAVES
 * ELECTRON PUMPING
 ELECTRONYSTAGMOGRAPHY
 ELLIPTICAL GALAXIES
 EMR 6050 COMPUTER
 END MORAINES

USE GLACIAL DRIFT
 ENERGY CONSERVATION
 ENERGY CONSUMPTION
 ENERGY POLICY
 ENERGY TECHNOLOGY
 ENERGY TRANSFER
 SCOPE NOTE IS DELETED
 ENCLAND
 ENGLISH CHANNEL
 ENTRENCHED STREAMS
 ENVIRONMENT EFFECTS
 ENVIRONMENT MANAGEMENT
 ENVIRONMENT PROTECTION
 ENVIRONMENTAL MONITORING
 ENVIRONMENTAL QUALITY
 ENVIRONMENTAL SURVEYS
 EOLE SATELLITES
 EOS-A
 USE LANDSAT E
 EOS-B
 USE LANDSAT F
 EPNL
 USE EFFECTIVE PERCEIVED NOISE LEVELS
 EQUALIZERS (CIRCUITS)
 EREP
 EROS (SATELLITES)
 ERROR CORRECTING CODES
 USE LANDSAT SATELLITES
 ERTS
 ERTS-A
 USE LANDSAT 1
 ERTS-B
 USE LANDSAT 2
 ERTS-C
 USE LANDSAT C
 ERTS-D
 USE LANDSAT D
 ERTS-E
 USE LANDSAT E
 ERTS-F
 USE LANDSAT F
 * ESA
 * USE EUROPEAN SPACE AGENCY
 * ESA SATELLITES
 ESCARPMENTS
 ESKERS
 USE GLACIAL DRIFT
 * ESRO
 * USE EUROPEAN SPACE AGENCY
 ESRO 4 SATELLITE
 ESTONIA
 ETHIOPIA
 EUROPA
 * EUROPEAN COMMUNICATIONS SATELLITE
 * EUROPEAN SPACE AGENCY
 * EUROPEAN SPACE RESEARCH ORGANIZATION
 * USE EUROPEAN SPACE AGENCY
 * EUROPEAN SPACE RESEARCH ORGANIZATION SAT
 * USE ESA SATELLITES
 EUTROPHICATION
 EVAPOTRANSPIRATION
 EVERGLADES (FL)
 * EXOSAT SATELLITE
 EXPENDABLE STAGES (SPACECRAFT)
 EXPERIMENTAL STCL TRANSPORT RSCH AIRPLANE
 USE QUESTOL
 EXPLORER 47 SATELLITE
 * EXPLORER 48 SATELLITE
 EXPLORER 49 SATELLITE
 EXPLORER 50 SATELLITE
 * EXPLORER 51 SATELLITE
 * EXPLORER 53 SATELLITE
 * EXPLORER 54 SATELLITE
 * EXTERNAL STORE SEPARATION
 * EXTERNAL TANKS
 EXTERNALLY BLOWN FLAPS
 EXTRAGALACTIC MEDIA
 USE INTERGALACTIC MEDIA
 EXTRAGALACTIC RADIO SOURCES
 EXTRASOLAR PLANETS
 EXTRATERRESTRIAL COMMUNICATION
 EXTRATERRESTRIAL ROVING VEHICLES
 USE ROVING VEHICLES
 EXTRAVEHICULAR MOBILITY UNITS
 EXTREMELY LOW FREQUENCIES
 F-114 AIRCRAFT
 F-16 AIRCRAFT
 F-17 AIRCRAFT
 FAIRFAX (VA)

DELETED

DELETED

FALLOW FIELDS
 FANS (LANDFORMS)
 FARMLANDS
 FAST FOURIER TRANSFORMATIONS
 FEASIBILITY ANALYSIS
 FEATHER RIVER BASIN (CA)
 FEDERAL REPUBLIC OF GERMANY
 USE GERMANY
 FERRIC IONS
 FERRITIC STAINLESS STEELS
 FERROFLUIDS
 FFT
 USE FAST FOURIER TRANSFORMATIONS
 FIBER ORIENTATION
 FIBONACCI NUMBERS
 FILAMENT WOUND CONSTRUCTION
 USE FILAMENT WINDING
 FILE MAINTENANCE (COMPUTERS)
 FILTER WHEEL INFRARED SPECTROMETERS
 FINGER LAKES
 FIORDS
 FIRE DAMAGE
 FIREBREAKS
 FISSILE FUELS
 FIXED POINT ARITHMETIC
 FLAME RETARDANTS
 FLAME SPECTROSCOPY
 FLATS (LANDFORMS)
 * FLIGHT COMPUTERS
 * USE AIRBORNE/SPACEBORNE COMPUTERS
 FLOOD DAMAGE
 FLOOD PLAINS
 FLUIDIC CIRCUITS
 FLYING EJECTION SEATS
 * FOG DISPERSAL
 FOLDS (GEOLOGY)
 FORENSIC SCIENCES
 USE LAW (JURISPRUDENCE)
 FOREST FIRE DAMAGE
 FOREST FIRES
 FOREST MANAGEMENT
 FOSSIL FUELS
 FREEZE DRYING
 FRENCH SATELLITES
 FREON
 FRICTION WELDING
 FRONTAL WAVES
 FROST DAMAGE
 FROZEN LAKES
 FROZEN SOILS
 USE PERMAFROST
 FUNCTIONALS
 * FUSION REACTORS
 * FUSION-FISSION HYBRID REACTORS
 FV-12A AIRCRAFT
 GABON
 GADOLINIUM ISOTOPES
 GALACTIC CLUSTERS
 GALACTIC NUCLEI
 GALACTIC ROTATION
 GALACTIC STRUCTURE
 GALLIUM OXIDES
 GAMEIA
 * GAMMA RAY ABSORPTION
 * GAMMA RAY ABSORPTION
 GAPS (GEOLOGY)
 GARP
 USE GLOBAL ATMOSPHERIC RESEARCH PROGRAM
 GARP ATLANTIC TROPICAL EXPERIMENT
 GAS COOLED FAST REACTORS
 GASDYNAMIC LASERS
 GASIFICATION
 GASP
 USE GLOBAL AIR SAMPLING PROGRAM
 GATE (EXPERIMENT)
 USE GARP ATLANTIC TROPICAL EXPERIMENT
 GE COMPUTERS
 GE 235 COMPUTER
 GENERAL ELECTRIC COMPUTERS
 USE GE COMPUTERS
 * GEODESIC LINES
 GEOPROFECTURES
 USE GEOLOGICAL FAULTS
 GEOL SATELLITES
 GEOLOGICAL SURVEYS
 GEOS SATELLITES (ESA)
 GEOS SATELLITES (ESRO)
 USE GEOS SATELLITES (ESA)
 GEOSTATIONARY OPERATIONAL ENVIRON SATS

DELETED

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REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

USE GOE SATELLITES
 GEOSYNCLINES
 GEOTHERMAL ENERGY CONVERSION
 GEOTHERMAL RESOURCES
 GHANA
 GLACIAL DRIFT
 GLACIOFLUVIAL DEPOSITS
 USE GLACIAL DRIFT
 GLASS FIBER REINFORCED PLASTICS
 GLOBAL AIR POLLUTION
 GLOBAL AIR SAMPLING PROGRAM
 GLOBAL ATMOSPHERIC RESEARCH PROGRAM
 GLOBULAR CLUSTERS
 GOBI DESERT
 GOE SATELLITES
 GORGES
 USE CANYONS
 GRABENS
 USE GEOLOGICAL FAULTS
 * GRAND CANYON (AZ)
 GRASSLANDS
 GRAVEL DEPOSITS
 USE GRAVELS
 * GRAVITATIONAL LENSES
 GRAZING
 GRAZING LANDS
 USE GRASSLANDS
 GREAT BASIN (US)
 GREAT LAKES (NORTH AMERICA)
 GREAT PLAINS CORRIDOR (NORTH AMERICA)
 GREAT SALT LAKE (UT)
 GREAT SMOKY MOUNTAINS (NC-TN)
 GREEN WAVE EFFECT
 GRIGG-SKJELLERUP COMET
 GUADELOUPE
 GUATEMALA
 GULF OF ALASKA
 GULF OF CALIFORNIA (MEXICO)
 GULF OF MEXICO
 GUM NEEULA
 GUNN DIODES
 GUYANA
 HABITATS
 * HAILSTORMS
 HAITI
 HAPLOSOPES
 HARBORS
 HARD LANDING
 HARDWARE UTILIZATION LISTS
 HARDWOOD FORESTS DELETED
 * HARPOON MISSILE
 HARRIER HELICOPTERS DELETED
 HAWKEYE SATELLITES
 HAY
 HAZE DETECTION
 * HCMH
 * USE HEAT CAPACITY MAPPING MISSION
 HCM LASERS
 * HEALTH-EDUCATION TELECOMMUNICATIONS EXP
 * USE HET EXPERIMENT
 * HEART IMPLANTATION
 HEART VALVES
 HEAT ACCLIMATIZATION
 * HEAT CAPACITY MAPPING MISSION
 HEAT ISLANDS
 HEAVY LIFT HELICOPTERS
 * HELICOPTER TAIL ACTORS
 HELIOS A
 HELIOS B
 HELIOS PROJECT
 HELIOS SATELLITES
 * HELIOS 1
 * HELIOS 2
 HELIUM-OXYGEN ATMOSPHERES
 * HELCS (SATELLITE)
 * USE EXOSAT SATELLITE
 * HET EXPERIMENT
 HEWLETT-PACKARD COMPUTERS
 HP LASERS
 HIGH DISPERSION SPECTROGRAPHS
 HIGH ECCENTRIC LUNAR OCCULTATION SATELLITE
 USE HELOS (SATELLITE)
 HIGH SPEED TRANSPORTATION
 USE RAPID TRANSIT SYSTEMS
 HIGH TEMPERATURE GAS COOLED REACTORS
 HIGHLY ECCENTRIC ORBIT SATELLITES
 USE HEOS SATELLITES
 HIS BUNDLE
 HOGBACKS
 USE RIDGES
 HOLCGRAMMETRY
 HOLOGRAPHIC INTERFEROMETRY
 * HOLOGRAPHIC STEREOSCOPY
 HONDURAS
 HONEYWELL COMPUTERS
 HONG KONG
 HOURGLASS VALLEYS DELETED
 HOUSTON (TX)
 HTGR
 USE HIGH TEMPERATURE GAS COOLED REACTORS
 HUBBLE CONSTANT DELETED
 HUBBLE DIAGRAM
 HUDSON RIVER (NY)
 HUL
 USE HARDWARE UTILIZATION LISTS
 HUMAN RESOURCES
 HYBRID CIRCUITS
 HYDROCLIMATOLOGY
 HYDROCYANIC ACID
 HYDROELECTRIC POWER STATIONS
 HYDROGEN-BASED ENERGY
 HYDROGEN CHLORIDES
 HYDROGEN CYANIDES
 USE HYDROCYANIC ACID
 HYDROGEN EMBRITTLEMENT
 HYDROPOWER STATIONS
 USE HYDROELECTRIC POWER STATIONS
 * HYDROXYL RADICALS
 HYPERBOLIC DIFFERENTIAL EQUATIONS
 HYPERSONIC WIND TUNNELS
 SCOPE NOTE (MACH 5 TO 10)
 HYPERVELOCITY WIND TUNNELS
 SCOPE NOTE CHANGED TO (ABOVE MACH 10)
 HYPSONOGRAPHY
 IBM 1050 COMPUTER DELETED
 IBM 2701 COMPUTER DELETED
 DELETED
 ICE ENVIRONMENTS
 ICE FLOES
 ICE JAMS DELETED
 ICE PACKS
 USE SEA ICE
 IFNI
 IGOS
 USE INTEGRATED GLOBAL OCEAN STATION SYSTEMS
 ILLIAC 3 COMPUTER
 IMBLS
 * IME SATELLITE
 * USE INTERNATIONAL MAGNETOSPHERIC EXPLORER
 IMP-H
 USE EXPLORER 47 SATELLITE
 IMP-J
 USE EXPLORER 50 SATELLITE
 IMP-1
 USE EXPLORER 18 SATELLITE
 IMP-2
 USE EXPLORER 21 SATELLITE
 IMP-3
 USE EXPLORER 28 SATELLITE
 IMP-4
 USE EXPLORER 34 SATELLITE
 IMP-5
 USE EXPLORER 41 SATELLITE
 IMP-6
 USE EXPLORER 43 SATELLITE
 IMPATT DIODES
 USE AVALANCHE DIODES
 IMPERIAL VALLEY (CA)
 IMPLANTED ELECTRODES (BIOLOGY)
 IMPROVED TIROS OPERATIONAL SATELLITES
 INCOMPRESSIBLE BOUNDARY LAYER
 INDIAN SPACE PROGRAM
 * INDIAN SPACE RESEARCH ORGANIZATION
 * USE ISRO
 INDONESIA
 INDUCTION MOTORS
 INDUSTRIAL AREAS
 INDUSTRIAL ENERGY
 INDUSTRIAL WASTES
 INERTIA WHEELS
 USE COUNTER ROTATING WHEELS
 INFESTATION
 INFRARED INTERFEROMETERS
 INFRARED RADIOMETERS
 INGRESS (SPACECRAFT PASSAGEWAY)
 INLAND WATERS
 INLETS (TOPOGRAPHY)
 INLIERS (LANDFORMS)

INSECT DAMAGE		
USE INFESTATION		
INSEQUENT STREAMS	DELETED	
INSHORE ZONES		
USE BEACHES		
* INTASAT SATELLITE		
INTEG MED AND BEHAVIORAL LAB MEASUR SYSTEM		
USE IMBLS		
INTEGRATED GLOBAL OCEAN STATION SYSTEMS		
INTEG PROGRAM FCR VEH DESIGN		
USE IPAD		
INTERCOSMOS SATELLITES		
INTERFACES		
INTERIM STAGES (SPACECRAFT)		
INTERLACING DRAINAGE		
USE DRAINAGE PATTERNS		
INTERMONTANE FLOOFS		
USE VALLEYS		
INTERNATIONAL FIELD YEAR FOR GREAT LAKES		
* INTERNATIONAL HYDROLOGICAL DECADE		
* INTERNATIONAL MAGNETOSPHERIC EXPLORER		
* INTERNATIONAL SUN AND EARTH EXPLORERS		
INTERNATIONAL ULTRAVIOLET EXPLORER		
USE IUE		
* INTERSTELLAR MASEFS		
INTERSTELLAR REDDENING		
USE INTERSTELLAR EXTINCTION		
INTRUSIONS	DELETED	
INTERSYMBOLIC INTERFERENCE		
INVERTED CONVERTERS (DC TO AC)		
IO		
ION ACOUSTIC WAVES		
ION IMPLANTATION		
IPAD		
IRAQ		
* ISEF		
* USE INTERNATIONAL SUN AND EARTH EXPLORERS		
ICLAND ARCS		
* INFO		
ITCHHOUSES		
ITOS 2		
ITOS 3		
ITOS 4		
IUE		
IVORY COAST		
I2S CAMERAS		
J-58 ENGINE		
JAMAICA		
JAPANESE SPACE PROGRAM		
JETTIES		
USE BREAKWATERS		
JIMSPHERE BALLOONS		
KALIHARI BASIN (AFRICA)		
KALMAN FILTERS		
KAME	DELETED	
KARST		
KELP		
USE SEAWEEDES		
KELVIN-HELMHOLTZ INSTABILITY		
KENYA		
KEROGEN		
KETTLES (GEOLOGY)		
KEYS (ISLANDS)		
KLIPPEN		
USE OUTLIERS (LANDFORMS)		
KOROUTEK COMET		
KOREA		
KP INDEX		
KUWAIT		
LAGEOS (SATELLITE)		
LAGOONS		
LAGRANGIAN EQUILIBRIUM POINTS		
LAKE BEDS		
USE BEDS (GEOLOGY)		
LAKE CHAMPLAIN BASIN (NY-VT)		
LAKE ERIE		
LAKE HURON		
LAKE ICE		
LAKE MICHIGAN		
LAKE ONTARIO		
LAKE PONTCHARTRAIN (LA)		
LAKE SUPERIOR		
LAKE TEXOMA (OK-TX)		
* LAMPS PROGRAM		
* USE LIGHT AIRBORNE MULTIPURPOSE SYSTEM		
LAND MANAGEMENT		
LANDFORMS		
LANDSAT SATELLITES		
LANDSAT 1		
LANDSAT 2		
LANDSAT C		
LANDSAT D		
LANDSAT E		
LANDSAT F		
LANDSLIDES		
LANGLEY COMPLEX CCORDINATOR		
LARGE AREA CROP INVENTORY EXPERIMENT		
LARGE SPACE TELESCOPE		
LASER APPLICATIONS		
LASER BEAM DEFOCUSING		
USE THERMAL ELCOMING		
LASER CAVITIES		
LASER DOPPLER VELOCIMETERS		
LASER DRILLING		
LASER GEODYNAMIC SATELLITE		
USE LAGEOS (SATELLITE)		
LASER MODE LOCKING		
LASER PLASMAS		
LATE STARS		
LATERITES		
LATTICE DRAINAGE PATTERNS	DELETED	
LATVIA		
LED (DIODES)		
USE LIGHT EMITTING DIODES		
LEON-QUERETARO AREA (MEXICO)		
LESCTHC		
LESSER ANTILLES		
LIBYA		
LICENSING		
LIECHTENSTEIN		
* LIGHT AIRBORNE MULTIPURPOSE SYSTEM		
LIGHT CURVE		
LIGHT EMITTING DIODES		
LIGHT WATER BREEDER REACTORS		
LIGHT-CONE EXPANSION		
LIGHTNING SUPPRESSION		
LIME DARKENING		
LIMNOLOGY		
LIMEAMENT		
USE STRUCTURAL PROPERTIES (GEOLOGY)		
LINEAR INTEGRATED CIRCUITS		
LIQUEFIED NATURAL GAS		
* LIQUID CHROMATOGRAPHY		
LIQUID HELIUM 2		
* LIQUID LITHIUM		
LIQUID METAL FAST BREEDER REACTORS		
LISP (PROGRAMMING LANGUAGE)		
LITHIUM NIOBATES		
LITHUANIA		
LITTORAL CURRENTS		
USE COASTAL CURRENTS		
LITTORAL DRIFT		
LITTORAL TRANSPORT		
LIVESTOCK		
LLANOS ORIENTALES (COLOMBIA)		
LMFBR		
USE LIQUID METAL FAST BREEDER REACTORS		
LNG		
USE LIQUEFIED NATURAL GAS		
LOCUST DAMAGE	DELETED	
LOCUST SWARMS	DELETED	
USE LOCUSTS		
LOCUSTS		
LONG ISLAND (NY)		
LONGSHORE BARS		
USE BARS (LANDFORMS)		
LONGSHORE CURRENTS	DELETED	
LOW ALLOY STEELS		
USE HIGH STRENGTH STEELS		
LOWER BODY NEGATIVE PRESSURE (LBNP)		
USE ACCELERATION STRESSES (PHYSIOLOGY)		
LOWER CALIFORNIA (MEXICO)	9170	
LST		
USE LARGE SPACE TELESCOPE		
LUMBERING AREAS		
USE FORESTS		
* LUNAR ALBEDO		
LUNAR EQUATOR		
LUNAR FIGURE		
* LUNAR MANTLE		
LUNAR RANGEFINDING		
LUNAR RETROREFLECTORS		
LUNAR ROTATION		
LUNAR SURFACE		
LUNIK 16 LUNAR PROBES		
LUNIK 17 LUNAR PROBES		
LUNIK 20 LUNAR PROBES		
LUXEMBOURG		

M STARS	
M-2F3 LIFTING BODY	
MAARS	
USE CRATERS	
MAFFEI GALAXIES	
MAGDALENA-CAUCA VALLEY (COLOMBIA)	
MAGELLANIC CLOUDS	
MAGNETIC FIELD CONFIGURATIONS	
* MAGNETIC FIELD INVERSIONS	
MAGNETIC LEVITATION VEHICLES	
MAGNETIC SUBSTANCES	
USE MAGNETIC STORMS	
MAGNETIC TAPE TRANSPORTS	
MAGNETOPLASMA DYNAMICS	
USE MAGNETOHYDRODYNAMICS	
MAGNETOTELLURIC PROFILING	
USE MAGNETIC SURVEYS	
MALAGASY REPUBLIC	
MALAWI	
MALAYSIA	
USE MALAYA	
MALITVE ISLANDS	
MALI	
MAN ENVIRONMENT INTERACTIONS	
MANITOU (CA)	
MARIJUANA	
MARINE ENVIRONMENTS	
* MARINE MAMMALS	
MARINE METEOROLOGY	
MARINE RESOURCES	
* MARINER JUPITER-SATURN FLYBY	
* MARINER JUPITER-URANUS FLYBY	
MARINER 8 SPACE PROBE	
MARINER 9 SPACE PROBE	
* MARINER 10 SPACE PROBE	
MARITIME SATELLITES	
* MARS PHOTOGRAPHS	
MARS 2 SPACECRAFT	
MARS 3 SPACECRAFT	
* MARS 5 SPACECRAFT	
MARS 6 SPACECRAFT	
MAPSHES	
USE MARSHLANES	
MAPTINIQUE	
MARVS (PROGRAMMING LANGUAGE)	
MASSIFS	
MATCHED FILTERS	DELETED
MATURE STREAMS	DELETED
MATURE VEGETATION	
MAUPITANIA	
MEADOWLANDS	
USE GRASSLANDS	
MEANDERS	
MEGALOPOLISES	
MEKONG RIVER BASIN	
MERCUPE AIRCRAFT	
* MERRITT ISLAND (FI)	
MESAC	
MESOMETEOROLOGY	
MESON-MESON INTERACTIONS	
* METABOLIC DISEASES	
METAL FIBERS	
METAL-INSULATOR-METAL SEMICONDUCTORS	
USE MIM (SEMICONDUCTORS)	
METAL-NITRIDE-OXIDE-SILICON	
METAL-CHLORIDE-METAL SEMICONDUCTORS	
USE MOM (SEMICONDUCTORS)	
METALLIC HYDROGEN	
METALLIC STARS	
METEOR CRATERS	
USE CRATERS	
METEOSAT SATELLITE	
METRIC SYSTEM	
USE INTERNATIONAL SYSTEM OF UNITS	
METROPOLITAN AREAS	
USE CITIES	
MICROMETEORITES	
MICROPOROUS FLUIDS	
MICROWAVE EMISSION	
MICROWAVE HOLOGRAPHY	
MICROWAVE LANDING SYSTEMS	
* MICROWAVE SPECTROMETERS	
MILITARY OPERATIONS	
MILLET	
* MILLIAMMETERS	
MIM (SEMICONDUCTORS)	
MINERAL EXPLORATION	
MINERAL METABOLISM	
MINICOMPUTERS	
MISSISSIPPI DELTA (LA)	
MISSISSIPPI RIVER (US)	
MNOS	
USE METAL-NITRIDE-OXIDE-SILICON	
MODEMS	
MODULATION TRANSFER FUNCTION	
MODULATORS-DEMODULATORS	
USE MODEMS	
MOJAVE DESERT (CA)	
MOM (SEMICONDUCTORS)	
MOMACO	
MONOCLINAL VALLEYS	DELETED
MOONQUAKES	
MONTEREY BAY (CA)	
MORAINAL DELTAS	DELETED
MORAINAL LAKES	DELETED
MORAINES	
USE GLACIAL CLEFT	
MOTION PERCEPTION	
MOTION SIMULATORS	
MRCA AIRCRAFT	
MTP	
USE MODULATION TRANSFER FUNCTION	
MUD FLATS	DELETED
MULTI-ROLE COMBAT AIRCRAFT	
USE MRCA AIRCRAFT	
MULTIPROCESSING (COMPUTERS)	
MULTISPECTRAL PAINT CAMERAS	
MUSCAT AND OMAN	
MUSKEGS	
MYOCARDIAL INFARCTION	
NAPPES	
USE FOLDS (GEOLOGY)	
NASA COMMUNICATION NETWORK	
USE NASCOM NETWORK	
* NASA STRUCTURAL ANALYSIS PROGRAM	
* USE NASTRAN	
NASCOM NETWORK	
* NASTRAN	
NATURAL GAS	
NEAR FIELDS	
NEAR WAKES	
NEARSHORE WATER	
NEUTRAL SHEETS	
NEW ENGLAND (US)	
NEW GUINEA (ISLAND)	
NEW HAVEN (CT)	
NICARAGUA	
NIGER	
* NIMBUS F SATELLITE	
* NIMBUS G SATELLITE	
NITROGEN METABOLISM	
NOAA SATELLITES	
NOAA 2 SATELLITE	
NOAA 3 SATELLITE	
NOISE GENERATORS	
NOISE MEASUREMENT	
NOISE POLLUTION	
NONAQUEOUS ELECTROLYTES	
NON-EQUILIBRIUM THERMODYNAMICS	
NONLINEAR OPTICS	
NORTH KOREA	
NORTH VIETNAM	
NORTHERN IRELAND	
NOSE FINS	
NUCLEAR LIGHTBULB ENGINES	
NUCLEAR POTENTIAL	
* NUCLEAR PUMPING	
NUCLEAR TRANSFORMATIONS	
NUMERICAL STABILITY	
NUNATAKS	
NUTATION DAMPERS	
OAO 1	
OAO 2	
OAO 3	
OAO-A	
USE OAO 1	
OAO-A2	
USE OAO 2	
OAO-C	
USE OAO 3	
OASES	
OATS	
OBLIQUE WINGS	
OCCCLUDED FRONTS	DELETED
OCEAN DATA ACQUISITIONS SYSTEMS	
OCEAN DATA PLATFORMS	
USE OCEAN DATA ACQUISITIONS SYSTEMS	
OCEAN DATA STATIONS	

USE OCEAN DATA ACQUISITIONS SYSTEMS	PALC VERDE VALLEY (CA)	
OCEAN MODELS	PAMPAS	
OCEANOGRAPHIC PARAMETERS	PANAVIA 200 AIRCRAFT	DELETED
ODAS	PARAGUAY	
USE OCEAN DATA ACQUISITIONS SYSTEMS	PARALLEL COMPUTERS	
ODD-EVEN NUCLEI	PARALLEL DRAINAGE	DELETED
OFFSHORE DOCKING	PARALLEL FLOW	
OFFSHORE ENERGY SOURCES	PARKS	
OFFSHORE PLATFORMS	PARTICLE TRACKS	
OFFSHORE REACTOR SITES	PARTONS	
OGO-B	PASSES	
USE OGO-3	USE GAPS (GEOLOGY)	
OGO-D	PASSIVE L-BAND RADIOMETERS	
USE OGO-4	PASTURES	DELETED
OGO-E	PATTERN METHOD (PRECASTING)	
USE OGO-5	* PDP 10 COMPUTER	
OGO-F	* USE SYSTEM 10 COMPUTER	
USE OGO-6	PEAKS (LANDFORMS)	
OGO-3	PEDIMENTS	
OGO-4	USE PIEDMOUNTS	
OGO-5	PEDIPLAINS	
OGO-6	USE PIEDMOUNTS	
OIL FIELDS	PENEPLAINS	
OIL RECOVERY	* PENINSULAR RANGES (CA)	
OIL SLICKS	PENINSULAS	
OME	PEOPLE SATELLITES	
USE ORBIT MANEUVERING ENGINE (SPACE SHUTTLE)	PEOPLES DEMOCRATIC REPUBLIC OF GERMANY	
OMEGA-MESONS	USE EAST GERMANY	
ONTOGENESIS	PERIPHERAL VISION	
USE ONTOGENY	PERSIAN GULF	
ONTOGENY	PESTICIDES	
OPEN PIT MINES	PHENOLOGY	
OPERATIONAL AMPLIFIERS	PHILIPPINES	
OPTICAL ACTIVITY	SPELLING CHANGE FROM PHILIPPINES	
OPTICAL DEPOLARIZATION	PHOENIX (AZ)	
OPTICAL GENERATORS	PHOENIX QUADRANGLE (AZ)	
USE LASER CAVITIES	PHOTOGRAPHIC PLATES	
OPTICAL MEMORY (DATA STORAGE)	PHOTOMAPPING	
OPTICAL RESONATORS	PHOTOMAPS	
OPTICAL TRANSFER FUNCTION	* PHOTON ABSORPTICMETRY	
OPTICAL WAVEGUIDES	PHREATOPHYTES	
* ORAL HYGIENE	PIEDMOUNTS	
ORBIT MANEUVERING ENGINE (SPACE SHUTTLE)	PIEDMONT PLAINS	DELETED
* ORBITAL MANEUVERS	PIEDMONT SCARPS	DELETED
* ORBITAL TEST SATELLITE (ESA)	RAISED REEFS	DELETED
USE OTS (ESA)	PIERS	
ORBITING FROG OTOLITH	USE WHARVES	
ORBITING LUNAR STATIONS	PIKE'S PEAK (CO)	
ORCHARDS	PINNACLES	
ORGANIC WASTES (FUEL CONVERSION)	USE PEAKS (LANDFORMS)	
ORIZABA-VERACRUZ AREA (MEXICO)	PIONEER 7 SPACE PROBE	
OROGRAPHIC CLOUDS	USE PIONEER 10 SPACE PROBE	
USE CAP CLOUDS	PIONEER VENUS SPACECRAFT	
ORR-SOMMERFELD EQUATIONS	PIONEER 10 SPACE PROBE	
OSO-B	PIONEER 11 SPACE PROBE	
USE OSO-2	PLAINS	
OSO-D	PLANETARY EXPLORES	
USE OSO-4	USE OUTER PLANETS EXPLORERS	
OSO-E	* PLANETARY MANTLES	
USE OSO-3	PLANETARY MAPPING	
OSO-F	PLANETARY QUAKES	
USE OSO-5	PLANETARY SATELLITES	
OSO-G	USE NATURAL SATELLITES	
USE OSO-6	PLANETARY STRUCTURE	
OSO-H	PLANKTON BLOCH	
USE OSO-7	USE PLANKTON	
OSO-J	PLANTING	
OSO-5	PLAYA LAKES	
OSO-6	USE LAKES	
OSO-7	PLAYAS	
* OSTEOPOROSIS	PLOWED FIELDS	
OTF	USE FARMLANDS	
USE OPTICAL TRANSFER FUNCTION	PLOWING	
* OTS (ESA)	PLUTONIUM 244	
OUTER PLANET MISSIONS	POLAIRE SATELLITE	
USE GRAND TOURS	USE D-2 SATELLITES	
OUTER PLANET SPACECRAFT	POLLUTION CONTROL	
USE OUTER PLANETS EXPLORERS	POLLUTION MONITORING	
OUTER SPACE TREATY	POMERONS	
OUTLETS (GEOLOGY)	POTOMAC RIVER VALLEY (MD-VA-WV)	
USE ESTUARIES	PRAIRIES	
OUTLET FLOW	USE GRASSLANDS	
OUTLIERS (LANDFORMS)	* PREBURNERS	
OUTWASH PLAINS	PRESELECTORS	
OXIDE FILMS	USE PREAMPLIFIERS	
OXYGEN IONS	PRESSURE ICE	
OXYGEN PLASMA	PRESSURE RIDGES	
* PA-34 SENECA AIRCRAFT	USE PRESSURE ICE	
PACIFIC NORTHWEST (US)	* PRIMITIVE EARTH ATMOSPHERE	

PRINCE WILLIAM SOUND (AK)		SALINE DOMES	DELETED
PROBE METHOD (FORECASTING)		SALINE SOILS	DELETED
PROFILE METHOD (FORECASTING)		SALT FLATS	
PROGRAMMING LANGUAGES		USE FLATS (LAMIPORMS)	
* PROTAGLANDINS		SALT MARSHES	DELETED
PRUSSIC ACID		SALTON SEA (CA)	
USE HYDROCYANIC ACID		SALYUT SPACE STATION	
PUBLIC HEALTH		* SAN ANDREAS FAULT	
* PYRAMID LAKE (NV)		SAN FRANCISCO (CA)	
PYRENEES MOUNTAINS (EUROPE)		SAN FRANCISCO BAY (CA)	
QUESTOL		SAN JOAQUIN VALLEY (CA)	
QUIET ENGINE PROCFAM		* SAN JUAN MOUNTAINS (CO)	
QUINOLINE		SAN MARCO 3 SATELLITE	
RADIAL DRAINAGE PATTERNS		SAN MARINO	
USE DRAINAGE PATTERNS		SAND DUNES	
RADIATION AND METEOROID SATELLITE		USE DUNES	
RADIATION HARDENING		SAND HILLS REGION (GA-NC-SC)	
RADIO ASTRONOMY EXPLORER B		SAND HILLS REGION (NE)	
USE EXPLORER 49 SATELLITE		SANTA RIVER BASIN (PERU)	
RADIO OCCULTATION		SAS-D	
RAILROADS		USE IUE	
USE RAIL TRANSPORTATION		* SAS-2	
RAIN FORESTS		SATELLITE POWER TRANSMISSION (TO EARTH)	
* RAINMAKING		SATELLITE SOLAR ENERGY CONVERSION	
RANGELANDS		SATELLITE SOLAR POWER STATIONS	
* RAPID BALLISTICS IDENTIFICATION		SATELLITE-BORNE INSTRUMENTS	
RAPIDS		SAUDI ARABIA	
RAVINES		SAVANNAHS	
RAYTHEON COMPUTERS		USE GRASSLANDS	
RECEPTION DIVERSITY		SCARS (GEOLOGY)	
RECTANGULAR DRAINAGE		USE EROSION	
USE DRAINAGE PATTERNS		SCATTERED CLOUDS	DELETED
RECYCLING		SCHEMATICS	
RED TIDE		USE CIRCUIT DIAGRAMS	
* REDUCED ORDER FILTERS		SCHMIDT TELESCOPES	
REEFS		SCHOTTKY DIODES	
REFERENCE STARS		SCIENTIFIC INSTRUMENT MODULES	
REGIONAL PLANNING		USE SIM	
REMOTE REGIONS		SCOTLAND	
REMOTELY PILOTED VEHICLES		SCRUBS (BOTANY)	
REPRODUCTION (BIOLOGY)		USE BRUSH (BOTANY)	
REPUBLIC OF CHINA		SDS 920 COMPUTER	
USE CHINA		SEA GRASSES	
REPUBLIC OF VIETNAM		SEA OF OKHOTSK	
USE VIETNAM		SEA WALLS	
RESIDENTIAL AREAS		USE BREAKWATERS	
RESOURCES MANAGEMENT		SEALS (ANIMALS)	
RETRAINING		SEASAT SATELLITES	
RETROGRESSIVE SHOELINES	DELETED	SEASAT-A SATELLITE	
REUSABLE HEAT SHIELDING		SEASAT-B SATELLITE	
REUSABLE ROCKET ENGINES		SEAWEEDES	
REYNOLDS STRESS		SECONDARY BATTERIES	
RHO-MESONS		USE STORAGE BATTERIES	
RHODESIA		SECONDARY FRONTS	DELETED
RHONE DELTA (FRANCE)		SECULAR VARIATIONS	
RIFT VALLEYS	DELETED	SEDIMENT TRANSPORT	
RIPTS		SEL COMPUTERS	
USE VALLEYS		SELECTION RULES (NUCLEAR PHYSICS)	
RIO GRANDE (NORTH AMERICA)		SEMICONDUCTOR PLASMAS	
RIVER BASINS		SENEGAL	
ROCK INTRUSIONS		* SENSITOMETRY	
ROCKY MOUNTAINS (NORTH AMERICA)		SEOS	
ROLLUP SOLAR ARRAYS		USE SYNCHRONOUS EARTH OBSERVATORY SATELLITES	
USE SOLAR ARRAYS		SERGENIUM	
ROMANIA		SEROTONIN	
USE ROMANIA		SEX FACTOR	
ROVING VEHICLES		SEYFERT GALAXIES	
RPV		SHALE OIL	
USE REMOTELY PILOTED VEHICLES		SHALLOW SHELLS	
RUNOFFS		SHALLOW WATER	
USE DRAINAGE		SHENANDOAH VALLEY (VA)	
RURAL AREAS		SHIELDS (GEOLOGY)	
RURAL LAND USE		USE BEDROCK	
RUST FUNGI		* SHIP TERMINALS	
RUSTS (BOTANY)		SHIPYARDS	
USE RUST FUNGI		SHOALS	
RWANDA		SHORELINES	
S-17 SATELLITE		SHUTTLE AVIONICS INTEGRATION LABORATORY	
USE OSO-2		USE SAIL PROJECT	
S-57 SATELLITE		SHUTTLE BOOSTERS	
USE OSO-C		USE SPACE SHUTTLE BOOSTERS	
S-67 HELICOPTER		SHUTTLE ORBITERS	
SA-321 HELICOPTER		USE SPACE SHUTTLE ORBITERS	
SACCADIC EYE MOVEMENTS		SICILY	
SACRAMENTO VALLEY (CA)		SIDEREAL TIME	
SADDLE POINTS		SIERRA LEONE	
* SAGINAW BAY (MI)		SIERRA NEVADA MOUNTAINS (CA)	
* SAHARA DESERT (AFRICA)		SIGMA ORIONIS	
SAIL PROJECT		SIGMA-MESONS	

SIKKIM		STARST PROGRAM	
SILTS		STATT ARY FRONTS	DELETED
USE SEDIMENTS		STEL AR ENVELOPES	
SIM		STELLAR GRAVITATION	
SINGAPORE		STELLAR TEMPERATURE	
SINKS (GEOLOGY)		STEP FAULTS	
USE STRUCTURAL BASINS		USE GEOLOGICAL FAULTS	
SIRIO SATELLITE		STEPPES	
SKYLAB SPACE STATION (UNMANNED)		STERILIZATION EFFECTS	
USE SKYLAB 1		STIFFNESS MATRIX	
SKYLAB 1		STISHOVITE	
SKYLAB 2		STOKES LAW OF RADIATION	
SKYLAB 3		STORM DAMAGE	
SKYLAB 4		* STORM ENHANCEMENT	
SL 1		* STORM SUPPRESSION	
USE SKYLAB 1		STOSS-AND-LEE TCPCOGRAPHY	
SL 2		USE GLACIAL DRIFT	
USE SKYLAB 2		STOWAGE (ONBOARD EQUIPMENT)	
SL 3		STRAITS	
USE SKYLAB 3		STRAKES	
SL 4		USE NOSE FINE	
USE SKYLAB 4		STRATHS	DELETED
* SLAM		STRESS CORROSION CRACKING	
* USE SUPERSONIC LOW ALTITUDE MISSILE		STRIP MINING	
SLASHES		STRUCTURAL BASINS	
USE CLEARINGS (OPENINGS)		STRUCTURAL DESIGN CRITERIA	
SLEUTH (PROGRAMMING LANGUAGE)		STRUCTURAL PROPERTIES (GEOLOGY)	
SLICKS		STYPHNATES	
USE OIL SLICKS		SUBURBAN AREAS	
SLOVENIA		SUD AVIATION SA-321 HELICOPTER	
SNOW PACKS	DELETED	USE SA-321 HELICOPTER	
* SNOWSTORMS		SUDAN	
* SODAR		SUDDEN STORM COMMENCEMENTS	
* USE SOUND DETECTING AND RANGING		SUGAR BEETS	
SOIL EROSION		SUGAR CANE	
SOIL MOISTURE		* SULFUR DIOXIDES	
SOLAR ARRAYS		SUPERCONDUCTING POWER TRANSMISSION	
SOLAR ELECTRIC PRCPULSION		SUPERNOVA REMNANTS	
SOLAR ELECTRONS		SUPERPLASTICITY	
SOLAR ENERGY CONVERSION		* SUPERSONIC LOW ALTITUDE MISSILE	
SOLAR GRANULATICN		SUPERSONIC WIND TUNNELS	
SOLAR CBLATENESS		SCOPE NOTE CHANGED TO (MACH 1 TO 5)	
SOLAR WIND VELOCITY		SURFACE WATER	
* SOLID WASTES		SURINAM	
SOLITARY WAVES		SUSQUEHANNA RIVER BASIN (MD-NY-PA)	
SOMALIA		SWAMPS	
SONOHOLOGRAPHY		USE MARSHLANDS	
USE ACOUSTICAL HOLOGRAPHY		SWAZILAND	
SORTIE CAN		* SWING WINGS	
CHANGE IN USE REFERENCE TO SPACELAB		SYMPHONIE SATELLITES	
SORTIE LAB		SYNCHRONOUS EARTH OBSERVATORY SATELLITE	
USE SPACELAB		SYNCLINAL VALLEYS	DELETED
* SOUND DETECTING AND RANGING		SYNCLINES	
SOUND HOLOGRAPHY		SYNCLINORIA	
USE ACOUSTICAL HOLOGRAPHY		USE SYNCLINES	
SOUNDS (TOPOGRAPHIC FEATURES)		SYNTHANE	
SOUTH VIETNAM		SYNTHESIZERS	
USE VIETNAM		SYNTHETIC FUELS	
SOUTHERN CALIFORNIA		SYNTHETIC METHANE	
SOVIET UNION		USE SYNTHANE	
USE U.S.S.R.		* SYSTEM 10 COMPUTER	
* SPACE COLONIES		TACT PROGRAM	
SPACE DIVERSITY		TANKER TERMINALS	
USE RECEPTION DIVERSITY		TANTALUM ISOTOPES	
* SPACE FLIGHT TRACKING AND DATA NETWORK		TAR SANDS	
SPACE MANUFACTURING		TD SATELLITES	
SPACE PLASMA H/P INTERACTION EXPERIMENTS		TEA LASERS	
USE SPHINX		TELECONFERENCING	
SPACE POWER REACTCRS		TELESAT CANADA A	
SPACE SHUTTLE BOOSTERS		USE ANIK A	
SPACE SHUTTLE ORBITERS		TELESAT CANADA B	
* SPACECRAFT DOCKING MODULES		USE ANIK B	
SPACELAB		* TELESAT CANADA C	
SPANISH SAHARA		USE ANIK 3	
SPECIMEN GEOMETRY		TENNESSEE VALLEY (AL-KY-TN)	
SPECKLE PATTERNS		* TERCOM	
SPECTROGRAPHS		TERRACES (LANDFORMS)	
SPHINX		* TERRAIN CONTOUR MATCHING NAVIGATION SYSTEM	
SPITSBERGEN (NORWAY)		USE TERCOM	
SPLITS (GEOLOGY)		TF-34 ENGINE	
USE GEOLOGICAL FAULTS		THALLIUM ALLOYS	
SPRINGS (WATER)		THERMATIC MAPPING	
SQUALL LINES	DELETED	THERMAL BLOOMING	
SRET SATELLITES		THERMAL DEFOCUSING	
SRET 1 SATELLITE		USE THERMAL BLOOMING	
SRET 2 SATELLITE		THERMAL MAPPING	
SRI LANKA		THERMOELECTRIC SPACECRAFT	
USE CEYLON		USE TOPS (SPACECRAFT)	
ST LOUIS-KANSAS CITY CORRIDOR (MO)		THERMOHYDRAULICS	

THERMOMECHANICAL TREATMENT	
THRUST FAULTS	
USE GEOLOGICAL FAULTS	
TIBET	
TIDAL FLATS	
TIDAL WAVE DAMAGE	DELETED
TIDAL WAVES	
TIDE POWERED GENERATORS	
TIDE POWERED MACHINES	
TIDEPower	
TILT ROTOR RESEARCH AIRCRAFT PROGRAM	
TIMBERLINE	
TIROS K SATELLITE	
TIROS N SATELLITE	
TITAN	
TOGO	
TOKAMAK FUSION REACTORS	
TOMBOLOS	
USE BARS (LANDFORMS)	
TORNADO DAMAGE	DELETED
TORO ASTEROID	
TOURNESOLE SATELLITE	
USE D-2 SATELLITES	
TOWERING CUMULI	DELETED
TRANSHORIZON RADIC PROPAGATION	
TRANSISTOR-TRANSISTOR-LOGIC INTEG CIRCUITS	
USE TTL INTEGRATED CIRCUITS	
TRANSONIC AIRCRAFT TECHNOLOGY PROGRAM	
USE TACT PROGRAM	
TRANSPORTATION ENERGY	
TRANSVERSE FAULTS	DELETED
TRANSVERSE VALLEYS	DELETED
TRANSVERSELY EXCITED ATMOSPHERIC LASERS	
USE TEA LASERS	
TRAPATT DEVICES	
TRAPATT DIODES	
USE AVALANCHE DIODES	
TRAPPED PLASMA AVALANCHE TRIGGERED TRANSIT	
USE TRAPATT DEVICES	
TRELLISED DRAINAGE	DELETED
TRENCHES	DELETED
TRIBUTARIES	
TRINIDAD AND TOBAGO	
TSUNAMI DAMAGE	DELETED
TTL INTEGRATED CIRCUITS	
TU-154 AIRCRAFT	
TUNDRA	
TUNISIA	
* TURBOPAUSE	
TWO DIMENSIONAL BC'NDARY LAYER	
* TWO-WAVELENGTH LASERS	
TYPHOON DAMAGE	DELETED
UGANDA	
* UH-60A HELICOPTER	
* UH-61A HELICOPTER	
UHURU SATELLITE	
UK SATELLITES	
* ULTRASHORT PULSED LASERS	
* ULTRASONIC CLEANING	
* ULTRASONIC FLAW DETECTION	
* ULTRAVIOLET LASERS	
UMBRA (SHADOWS)	DELETED
UMBRAS	
* UNDERWATER RESEARCH LABORATORIES	
UNITED ARAB REPUBLIC	
UNITED KINGDOM	
UNITED KINGDOM SATELLITES	
USE UK SATELLITES	
UNIVAC 494 COMPUTER	
UNIVAC 1106 COMPUTER	
UNIVAC 1230 COMPUTER	
UPPER STAGE ROCKET ENGINES	
UPPER VOLTA	
UPSETTING	
CHANGED TO METALLIC MATERIALS TERM	
UPWELLING	
USE UPWELLING WATER	
UPWELLING WATER	
URANIUM PLASMAS	
URBAN AREAS	
USE CITIES	
URUGUAY	
USER MANUALS (COMPUTER PROGRAMS)	
USER REQUIREMENTS	
* UV LASERS	
* USE ULTRAVIOLET LASERS	
VACUUM TESTS	
VATICAN CITY	
VEGETATION GROWTH	
VENERA 7 SATELLITE	
VENERA 8 SATELLITE	
VENUS CLOUDS	
VESTIBULAR NYSTAGMUS	
* VIKING LANDER 1	
* VIKING LANDER 2	
* VIKING ORBITER 1	
* VIKING ORBITER 2	
* VIKING 1 SPACECRAFT	
* VIKING 2 SPACECRAFT	
VIKING 75 ENTRY VEHICLE	
VINEYARDS	
VIRGIN ISLANDS	
VISUAL PIGMENTS	
VOLCANES	
VOLTAGE CONVERTERS (AC TO AC)	
VOLTAGE CONVERTERS (DC TO DC)	
WABASH RIVER BASIN (IL-IN-OH)	
WADIS	
WARM FRONTS	
WASTE ENERGY UTILIZATION	
WATER CIRCULATION	
WATER COLOR	
WATER CURRENTS	
WATER DEPTH	
WATER QUALITY	
WATER RESOURCES	
WATER RUNOFF	
WATER TABLES	
WATER WHEELS	
WATERFOWL	
WATERSHEDS	
WATERWAVE ENERGY	
WATERWAVE ENERGY CONVERSION	
WATERWAVE POWERED MACHINES	
WAVE AMPLIFICATION	
WAVE PACKETS	
WEIGHT REDUCTION	
WEST PAKISTAN	
WESTAR SATELLITES	
WETLANDS	
WHAIVES	
WHEAT	
WHITE HOLES (ASTRONOMY)	
WILDERNESS	
WILDLIFE	
WILDLIFE RADIOLOCATION	
* WILLISTON BASIN (NORTH AMERICA)	
WIND EROSION	
WIND RIVER RANGE (WY)	
WIND TUNNEL TESTS	
WINDMILLS (WINDPOWERED MACHINES)	
WINDPOWER UTILIZATION	
WINDPOWERED GENERATORS	
WINDPOWERED PUMES	
WRANGELL MOUNTAINS (AK)	
X FESONS	
X RAY LASERS	
X RAY SOURCES	
X RAY SPECTRA	
YAG LASERS	
YC-14 AIRCRAFT	
YELLOWSTONE NATIONAL PARK (ID-MT-WY)	
YF-12 AIRCRAFT	
YF-16 AIRCRAFT	
* YUH-60A HELICOPTER	
USE UH-60A HELICOPTER	
* YUH-61A HELICOPTER	
USE UH-61A HELICOPTER	
ZAIRE	
ZAMBIA	

NASA THESAURUS TERMS ADDED OR CHANGED DURING DECEMBER 1975

AE-E

USE EXPLORER 55 SATELLITE

ANIK 1

ANIK A

USE ANIK 1

ATMOSPHERE EXPLORER E

USE EXPLORER 55 SATELLITE

CHINESE SPACE PROGRAMS

EXPLORER 55 SATELLITE

F-17 AIRCRAFT

MICROPROCESSORS

PHOTONICS

PICOSECOND PULSES

RCA SATCOM 1

SAS

SMALL ASTRONOMY SATELLITES

USE SAS

- | | | |
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| W.J. van der Oord | 10 | |
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| Mekong Secretariat
c/o ESCAP, Sala Santitham
Bangkok, Thailand | 11. GSFC Technical Monitor
Mr. Frederick Gordon | |
| 12. Sponsoring Agency Name and Address | 13. Key Words (Selected by Principal Investigator) | |
| Mr. Frederick Gordon
Code 902
NASA/Goddard Space Flight Center
Greenbelt, Maryland 20771 | - Colour diazochrome films
- Mapping programme
- Computer Compatible Tapes | |
| 14. Supplementary Notes | | |
| 15. Abstract | | |

TYPE II QUARTERLY REPORT

I. INTRODUCTION

The main objectives of the Mekong Committee investigations using Landsat data are as follows:

A. Short-term objectives

By both photo-interpretation and automatic data processing techniques, supported by ground truth data and field surveys, establish:

- Land use, land capability and hydrogeomorphology maps of the lower Mekong basin;
- Maps showing primary forests and deciduous forest areas;
- Maps showing consecutive flood and drainage patterns of Mekong lowlands.

B. Long-term objectives

Organise a research programme for classification of agricultural crops and land use, and for soil moisture monitoring. The test area of the lower Mekong basin covers the whole Laos and Cambodia, the North and Northeast Thailand, and the Mekong delta and the high lands of South Vietnam. The whole test area is about 600,000 sqkm.

II. TECHNIQUES

1. Data quality and delivery

For the identification of Landsat data the test area of the lower Mekong basin is defined by a convex polygon with five corners as follows:

<u>No.</u>	<u>Latitude</u>	<u>Longitude</u>
1	20° 00' N	100° 00' E
2	20° 00' N	106° 00' E
3	12° 00' N	111° 00' E
4	08° 00' N	105° 00' E
5	16° 00' N	100° 00' E

/.....

Ten Landsat ground tracks and 55 Landsat scene frames cover the entire test area.

During the reporting period 42 frames taken by LANDSAT-2 were received, each frame consisting of one positive transparency 9.5 inch, one positive film 70 mm and one negative film 70 mm in bands 4, 5, 6 and 7.

The delivery time (between date the pictures are taken and received in Bangkok) was approximately 2 months and 20 days, which is for our purpose of resource mapping quite satisfactory.

Of the 42 frames received only 16 frames are covering the area of the lower Mekong basin. Most of the frames taken during raining season are obliterated by cloud cover (See Map 1).

2. Preparation of land use maps

The technique adopted for the preparation of land use maps is based on the conventional interpretation of the two following types of photographic products processed from Landsat imagery:

a. Black and white paper prints enlarged to 1:500,000 scale from 70 mm SYCI MSS negative transparencies were used. With the help of existing aerial photographs, topographic maps and field data, the terrain features according to their greytone levels on an overlay were identified and delineated.

- Band 4 with less contrast is of less use;
- Band 5 with good contrast is useful for the preparation of land use maps and vegetation maps;
- Band 6 and 7 are more suitable in the delineation of geologic structures, soil humidity and river systems.

/.....

b. Diazochrome colour films at 1:1,000,000 scale made from bands 4, 5 and 7 of the 9.5 inch SYCI MSS black and white positive transparencies were also used. Composite colour is made with band 4 in yellow, band 5 in magenta and band 7 in blue. To analyse the imagery false-colour composite techniques are used with the help of a projector-viewer for colour-composite reconstruction, and with colour transparencies processed from diazochrome proofing films.

The preparation of land use maps is based mainly on black and white paper prints enlarged to 1:500,000 scale from band 5.

A further enhancement of contrast in the imagery was attempted by means of a digital slicer on equipment made available for the purpose in France. Examples of these are shown in Fig. 1, 2 and 3.

Also a technique was developed for recognizing land systems out of the imagery, each of which corresponding to recurring colour patterns and colour tones. The first phase of interpretation consisting of the delineation of the major land systems is completed and a description of each is in progress. Each land system corresponds to a geographical unit with similar characteristics in physiography and soil. As sub-classification to these larger units, the hydrology of each system is being introduced. An example of the land system mapping is attached herewith (See Map 2).

3. Research programme for computer processing of remote sensing data

It is proposed to develop a processing system for classifying the remotely sensed multispectral digital data contained on the computer compatible tapes. Programs will be written to extract the digital information on the CCT's in a unified form for printing the greytone pictures as well as statistical results. The data analysis algorithms are based on pattern recognition methods utilizing statistical decision theory. The programs will be developed to permit features classification both on signatures obtained from ground truth (supervised methods), and

on signatures derived solely from the data (unsupervised method or clustering methods). The processing system will be developed to utilize efficiently the IBM 370/145 computer at the Asian Institute of Technology (AIT).

III. ACCOMPLISHMENTS

1. Preparation of land use maps, land capability maps and hydro-geomorphology maps

It is proposed to establish these maps at 1:500,000 scale. For this purpose the areas of the lower Mekong basin is divided into 37 zones. During the reporting period 26 zones had been analysed and controlled using existing aerial photographs. It was found that the analysis of Landsat data for small scale maps (1:1,000,000 - 1:500,000) had revealed informations, most of them impossible to detect through conventional aerial photography.

The preparation of the topographic map on 1:500,000 scale to be used as base map was also completed during the reporting period. It is to be expected that the land use maps will be published in 1976.

2. Research programme for computer processing of remote sensing data

On July 1975 an agreement was signed between the Mekong Committee and the Asian Institute of Technology (AIT) for the undertaking of a research programme for computer processing of remote sensing data. A ground truth station of 100 acres was established at AIT for ground truth observations. In support of the research, the ground truth data have been collected during every passage of LANDSAT-2 since August 1975. Due to the facts that AIT is replaced its CDC 3600 computer by an IBM 370/145 computer, the research in developing the processing system has to be postponed until February 1976.

/.....

IV. CONCLUSION

Work on LANDSAT-1 imagery is progressing according to schedule. It is hoped that in future more LANDSAT-2 data can be provided, so that the numerous gaps that still exist in the LANDSAT-1 data, available for the lower Mekong basin, will be filled. Also it will be of importance to obtain more regularly consecutive coverage of the imagery, which will be necessary for successful mapping of the hydrological characteristics of the land types of the Mekong basin.

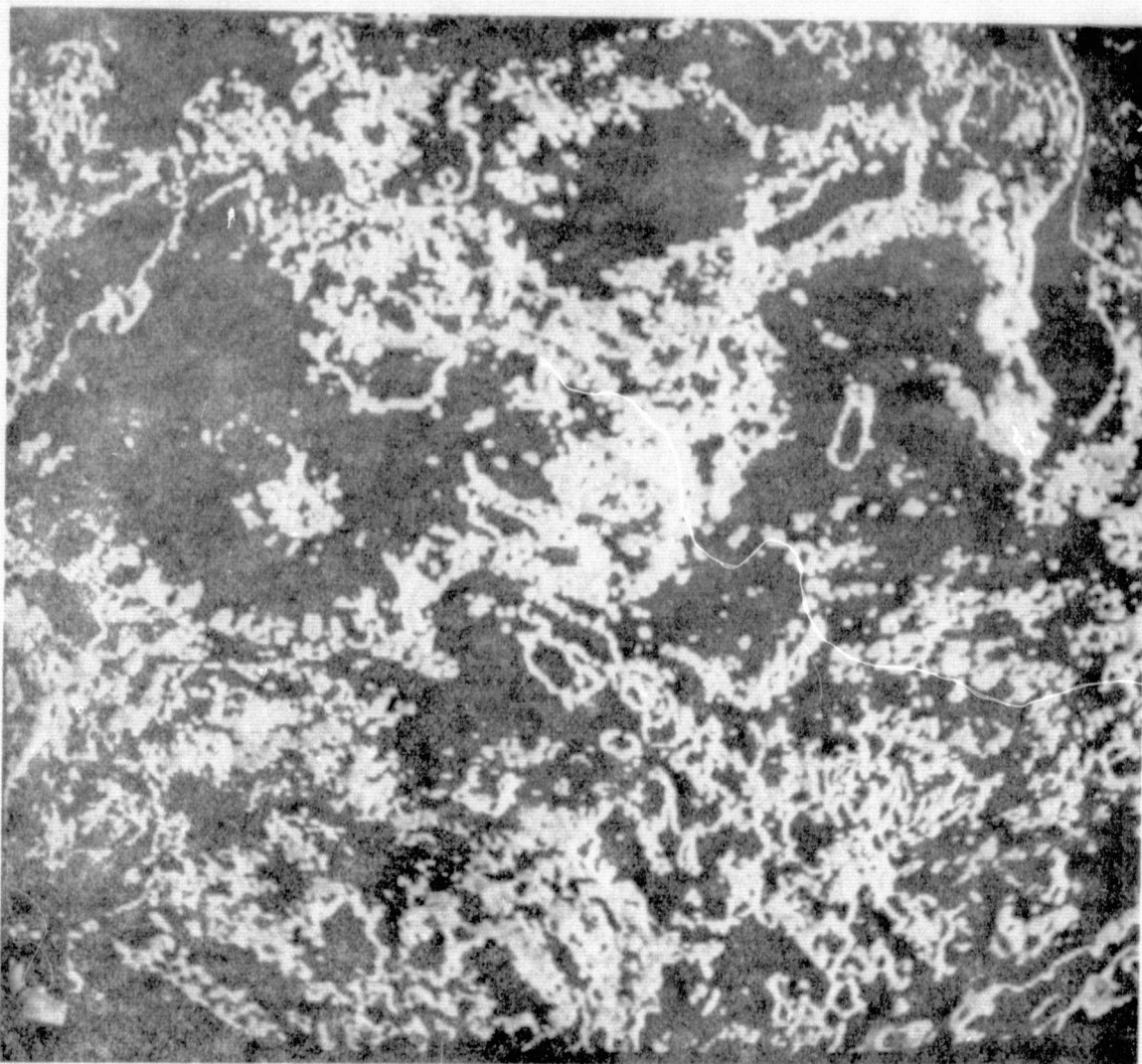


Fig. 1

Satellite frame ERTS-1 No.1202.03002 of 10 February 1973.

Band 5.

Out of the 32 energy levels, which the Digicol separates, only the blue levels 1, 2, 3, 4 have been retained. The areas separated in this way correspond to land with a high percentage of cultivation. This represents 28% of the total area covered by the frame.

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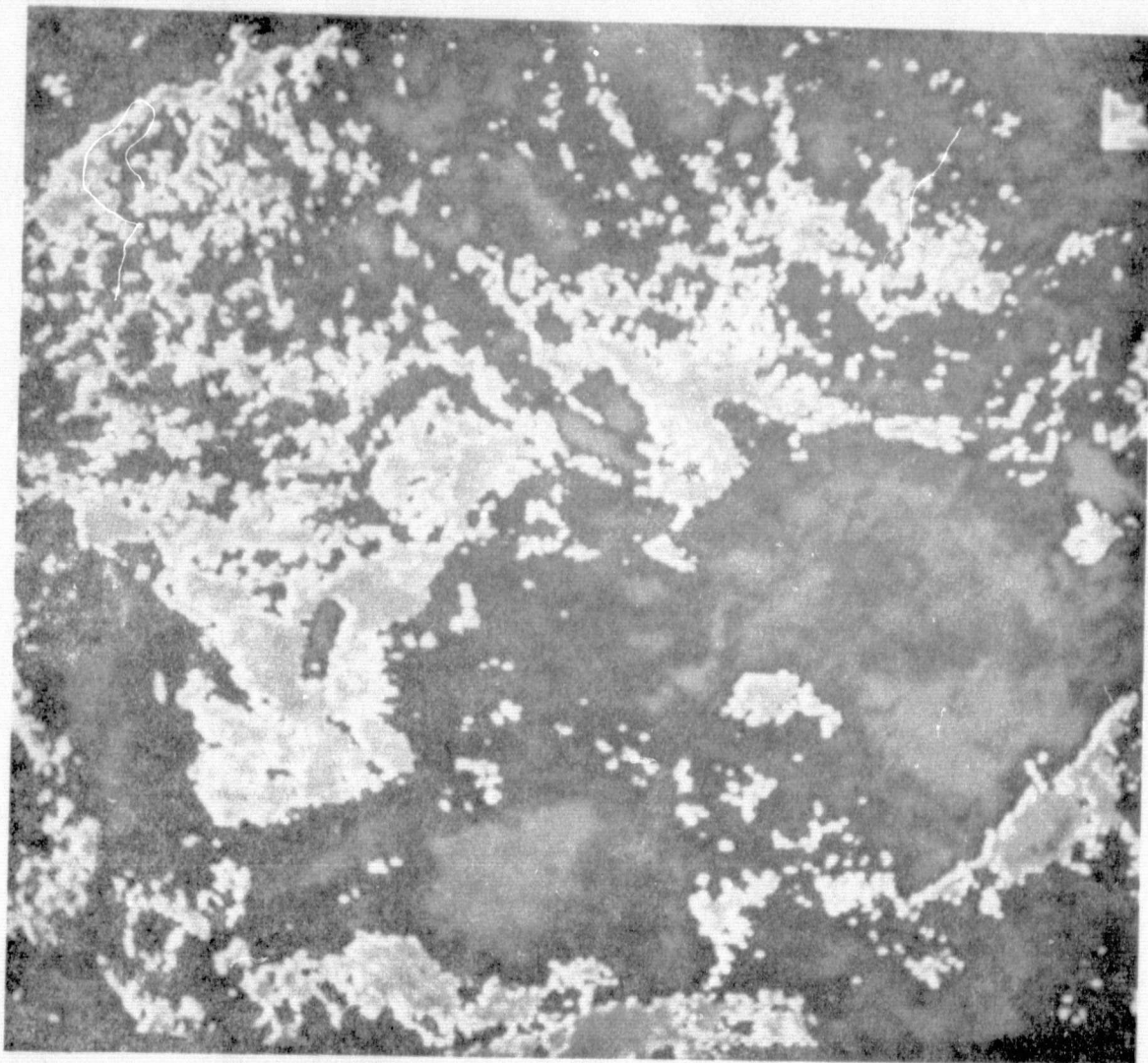


Fig. 2

Same frame as Fig. 1 but lands predominantly covered with open deciduous forest are separated. This vegetation type represents 24% of the total area of the frame.

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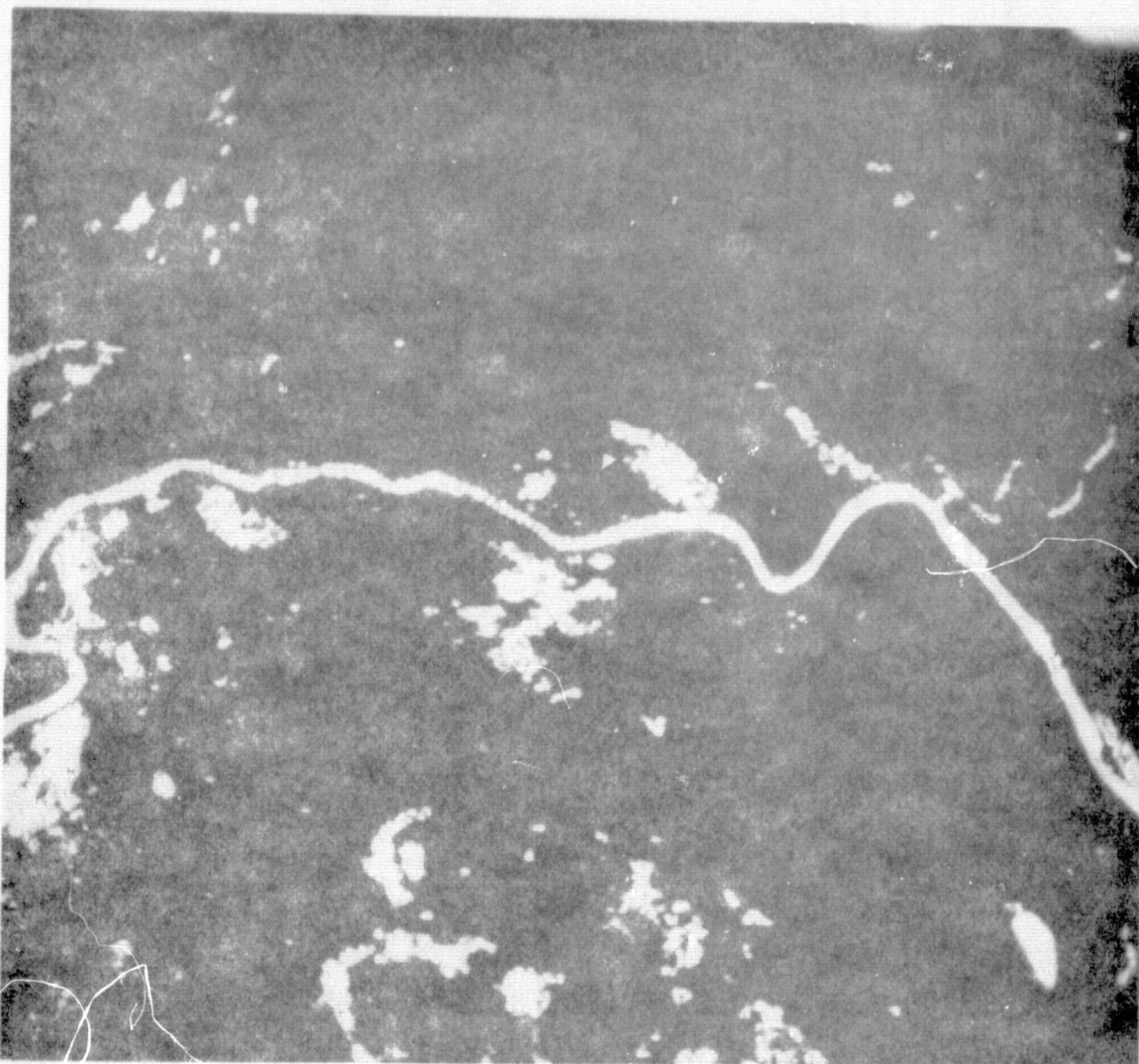


Fig. 3

The area covered by the picture is an enlargement of satellite imagery ERTS-1 No. 1148 02595 of 18 December 1972 - Band 7.

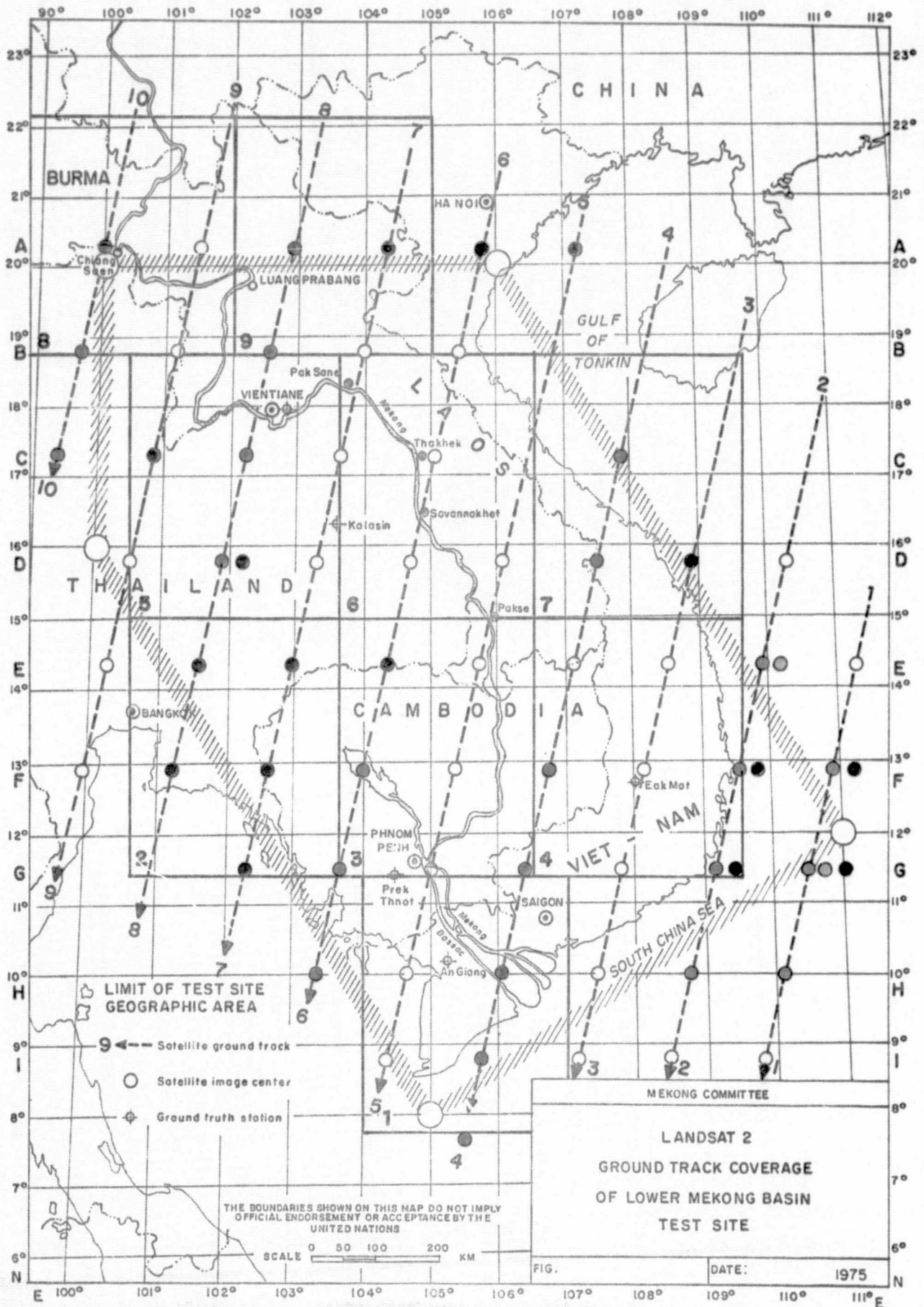
It separates humid portions in the region, between Red No.1 and Magenta No.4.

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LANDSAT 2 IMAGERY RECEIVED

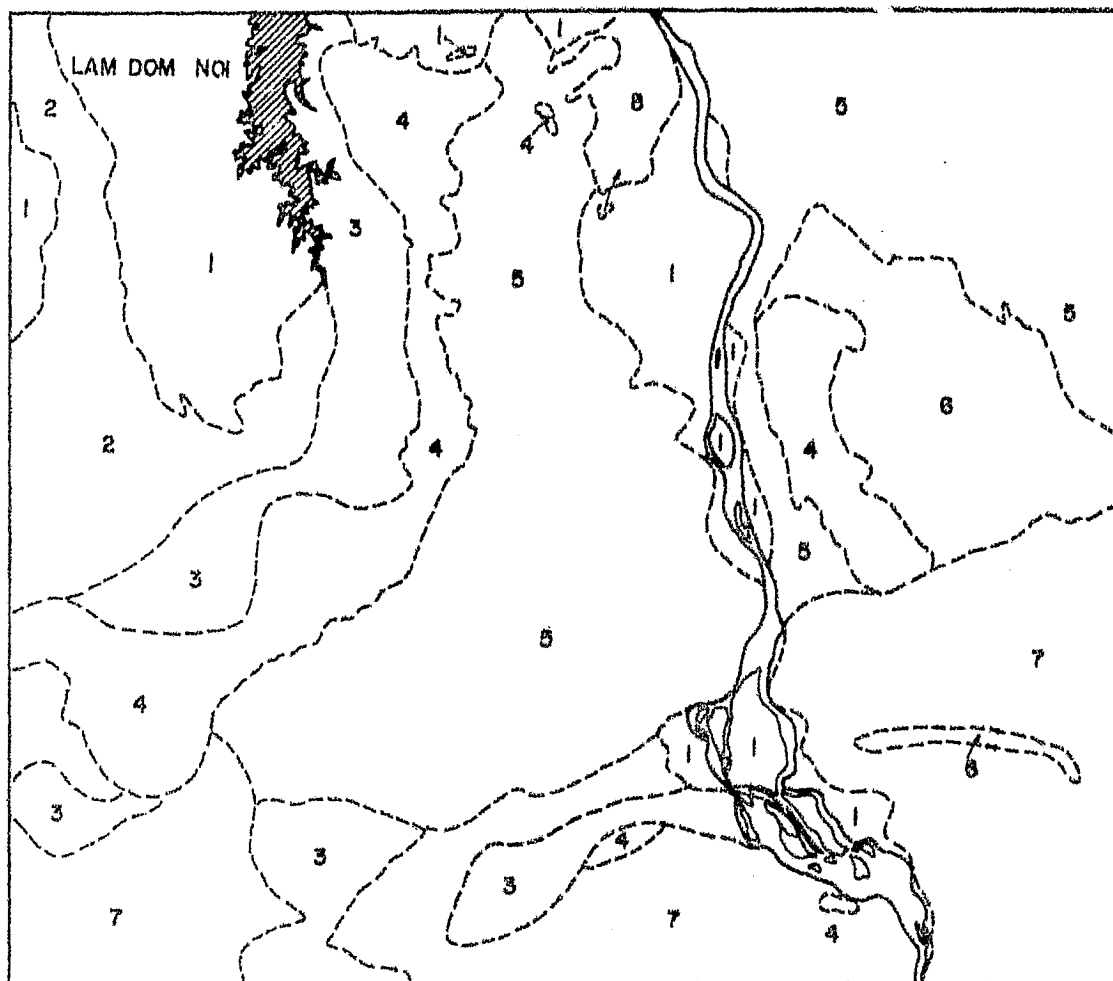
Taken in March ● May ● July ●
 April ● June ● August ●



LAND SYSTEMS

1:1,000,000

First phase preliminary interpretation



NASA ERTS E 1200 - 02494

08 Feb - 1973

LAND SYSTEMS

LEGEND

- Land system 1. Flat to undulating terrain, poorly and well drained soils.
- Land system 2. Flat to undulating terrain, well to excessively drained soils.
- Land system 3. Mainly rolling terrain with well drained soils.
- Land system 4. Hilly terrain, mainly shallow soils, well drained.
- Land system 5. Flat to gently undulating or slightly sloping terrain, mainly poorly drained soils, laterite.
- Land system 6. Dissected terrain, undulating to rolling, mainly shallow soils, well drained.
- Land system 7. Mainly flat terrain, moderately drained, shallow and deep soils.
- Land system 8. Mountainous terrain with shallow soils, well drained.